UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 24 1997

REPLY TO THE ATTENTION OF:

MEMORANDUM

SUBJECT: ACTION MEMORANDUM - Determination of Threat to Public Health, Welfare, or the Environment at the Toledo Tie Treatment Site, Toledo, Lucas County, Ohio (Site ID # B529)

FROM: Ralph H. Dollhopf, On-Scene Coordinator 12/18/97
Emergency Response Branch - Section 1

TO: William E. Muno, Director
Superfund Division

THRU: for Richard C. Karl, Chief Ronald J. Prince 12/22/97
Emergency Response Branch

I. PURPOSE

The purpose of this memorandum is to document the determination of an imminent and substantial threat to public health and the environment posed by the release of creosote and related contaminants from the Toledo Tie Treatment Site, Toledo, Lucas County, Ohio 43607.

The actions proposed herein will mitigate site conditions by containing hazardous substances that have already migrated to the site's surface water, Williams Ditch. The following actions shall also be conducted in a time-critical fashion: characterization of the extent of coal tar creosote contamination in Williams Ditch sediments, removal or implementation of alternative engineering controls to prevent continued release of those contaminants to surface water in Williams Ditch, and removal or implementation of engineering controls to prevent other source areas of the coal tar creosote from migrating to Williams Ditch or the surface of roadways at the site. Other time-critical removal activities will include the performance of an Engineering Evaluation/Cost Analysis (EE/CA) to consider the non-time critical removal alternatives available for stabilization and cleanup of remaining creosote and related hazardous substance contamination of soil, sediments, and surface water at the Toledo Tie Treatment (TTT) Site which may present an imminent and substantial endangerment to the public health or welfare.

The fact that releases of hazardous substances have already occurred and are likely to continue until removal activities have been completed require that this action be considered time-critical.

The TTT Site is not on the National Priorities List (NPL).

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID # OHD987049202

A. Physical Location and Description

The TTT Site is located in a light industrial area of Toledo, Ohio, known as the Arco Industrial Park. Its geographical coordinates are latitude 41 degrees 39.12 minutes north and longitude 83 degrees 34.48 minutes west. The TTT Site is made up of approximately 17 individually owned lots that comprise a part of the Arco Industrial Park. The areal extent of the the TTT Site is defined as all areas where coal tar creosote contamination has come to be located in and near the Arco Industrial Park. Williams Ditch traverses the TTT Site, flowing from southeast to northwest, and passes by a residential area north of Hill Avenue. Hill Avenue is the approximate northern boundary of the TTT Site. The water in Williams Ditch then empties into the Ottawa River several miles downstream of the TTT Site. There are approximately 75-100 people employed at the businesses in the Arco Industrial park. The closest residential areas are about 1/4 mile south and northeast of the TTT Site. Approximately 24,000 people, 84 percent of them black, live within a 1-mile radius of the site. Homes in the area are 58.9 percent owner-occupied. The median household income of the area is $18,794.

B. Site Background

The TTT Site was part of a large, 50-acre railroad tie treatment facility owned and operated by the Federal Creosoting Company from 1923 to 1959 and from 1959 to 1962 by the American Creosoting Corporation. During the period of operation, wooden railroad ties were treated with coal tar creosote (in order to preserve the ties) at the TTT Site by the Federal Creosoting Company and the American Creosoting Corporation. The creosoting operations included several aboveground creosote storage and dip tanks, a retort house, powerhouse, deep wells, and waste lagoons. These site features were situated south of the present day location of Frenchmens Road and east of the present day location of Arco Drive in the Arco Industrial Park. In addition, railroad tie storage areas appear to have existed on both the east and west perimeters of the process structures. Kerr McGee Chemical Corporation (KM) is the successor corporation of the American Creosoting Corporation.

After 1969, the former railroad tie treatment facility was subdivided into a number of parcels by Arco Realty, Inc., and the area developed into a business and industrial park. The parcels that comprise the TTT Site are currently owned by a number of different parties and contain a number of different businesses. According to Ohio Environmental Protection Agency (OEPA) records, a series of investigations by private parties at the TTT Site from 1987 to 1990 indicated contamination with polycyclic aromatic hydrocarbons (PAHs) which are compounds found in coal tar creosote.

In 1993, the OEPA conducted a Site Inspection (SI). The SI included collection of five soil

samples, two sediment samples and two surface water samples from Williams Ditch. The analyses of soil samples demonstrated very high concentrations of 18 PAH compounds in the area of the former waste (creosote) lagoons. The OEPA concluded that the sediment in Williams Ditch near the intersection of Frenchmens Drive and Arco Drive contained at least 1 foot of creosote. OEPA's analysis of the sediment confirmed the presence of PAH compounds, including phenanthrene, naphthalene, acenaphthene, benzo(a)pyrene, fluroanthene, pyrene, and chrysene.

In 1995, the Ohio Department of Health (ODH) conducted a Health Consultation at the TTT Site and determined that the on-site subsurface soils and sediments in Williams Ditch are saturated with creosote and contaminated with PAHs, including phenanthrene, naphthalene, acenaphthene, benzo(a)pyrene, fluroanthene, pyrene, and chrysene. Furthermore, ODH observed that the concentration of the contaminant benzo(a)pyrene is up to 150 times the ODH Calculated Cancer Screening Level of 1.0 parts per million. ODH concluded that persons who may have dermal contact with creosote-contaminated soils or contaminated sediments at the TTT Site from digging into contaminated soils or wading in Williams Ditch would be at risk. ODH expressed concern that access to the contaminated soil and to Williams Ditch at the TTT Site is unrestricted.

The U.S. EPA, along with the State of Ohio, was evaluating the use of non-time critical removal authority to address the contamination at the TTT Site when the National Response Center was notified of the presence of a sheen of an unknown oil in Williams Ditch by National Super Service (NSS) on September 26, 1997. NSS, a commercial occupant of the Arco Industrial Park, also advised U.S. EPA that suspected creosote materials were blocking a portion of its on-site storm water runoff system, and that an oily sheen was present on Williams Ditch. On October 1, 1997, representatives of U.S. EPA's Emergency Response Branch (ERB) evaluated conditions in Williams Ditch within the Arco Industrial Park. Extensive oil sheening upgradient of the NSS storm sewer outfall to Williams Ditch between Arco Drive and the outfall of the NSS storm sewer outfall was observed. This sheening was very heavy at a point in the ditch just east (50-100 feet) of Arco Drive and just north (50-100 feet) of the historical location of suspected creosote lagoon areas.

These suspected former lagoon areas are also in the same location at which OEPA measured high levels of PAH contaminants in 1993. The portion of Williams Ditch with heavy sheening is the point at which a storm sewer appearing to run through the lagoon area outfalls to Williams Ditch. It is also immediately adjacent to a section of Frenchmens Road, between the lagoon areas and Williams Ditch, where the road surface has undergone failure and where visual indications of subsurface releases of oil to the road surface are readily apparent. Even though the development of oil sheening within the ditch was at least partially occurring upgradient of the NSS outfall, a local cleanup contractor previously retained by NSS to clear its blocked sewers placed an absorbent boom across Williams Ditch just downstream of the NSS outfall. This boom placement was conducted by NSS pursuant to U.S. EPA's request on that same day.

On October 8, 1997, U.S. EPA was advised by contract personnel who had been dispatched to monitor site conditions that heavy accumulations of sheen were developing behind the NSS boom

and that sheening upgradient in the vicinity of the historical lagoons was considerably heavier than previously observed. In addition, for the first time, it was reported that sheen buildups were observed as far downgradient as Hill Avenue to the north of the industrial park. It was further reported that a release of oily contaminants directly to the failed portion of Frenchmens Road was continuing at an increased rate.

On October 10, 1997, consultants and contractors retained by KM initiated oil containment and recovery efforts in Williams Ditch. On November 19, 1997, the U.S. EPA OSC advised KM's on-site representatives and KM that containment and recovery efforts were not satisfactory. On December 3 and 4, 1997, U.S. EPA advised KM that if containment and recovery efforts were not conducted in a more complete, timely fashion, that U.S. EPA would undertake response actions directly.

III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions at the TTT Site present an imminent and substantial threat to the public health, or welfare, and the environment and meet the criteria for a removal action provided for in the National Contingency Plan (NCP), Section 300.415, Paragraph (b)(2). 40 C.F.R. § 300.415(b)(2)(i), (iii) and (vii), respectively, specifically allow removal actions for:

A. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

This condition is present at the TTT Site because of the existence of PAHs in the soil and in the sediments of Williams Ditch as documented by OEPA during its 1993 SI. These PAHs are hazardous substances within the definition of Section 101(14) of CERCLA, 42 U.S.C. § 9601(14). Exposure to PAHs has been associated with adverse skin effects and the development of lesions and skin cancer in animals and humans. Access to Williams Ditch is completely uncontrolled. Utility workers, maintenance personnel, other employees of businesses in the Arco Industrial Park, and area children are all examples of persons who could readily contact PAH-contaminated sediments and floating surface oils in Williams Ditch.

Actual, direct contact exposures to Williams Ditch sediment and surface oil contaminants by waterfowl and muskrats have been observed on several occasions by U.S. EPA and contractor monitoring personnel.

B. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;

This condition is present at the TTT Site due to the existence of PAH contamination containing hazardous substances in soils at the TTT Site and in Williams Ditch which flows off-site and discharges into the Ottawa River and ultimately into Lake Erie. The presence of large volumes of coal tar creosote in Williams Ditch sediments confirms that such wastes have historically been discharged or have passively migrated to the ditch (or both). The recent observation of the spontaneous releases of oil from coal tar-laden sediments to the surface of the ditch suggests that migration of these hazardous substances to the Ottawa River and Lake Erie has been occurring for many years and is likely to continue until all contaminants in the ditch sediments have been removed.

In addition, failure of the roadway surface between the site of suspected creosote waste lagoons and Williams Ditch and the presence of massive amounts of creosote in the ditch at that location and the observation of a sheen buildup in the ditch as far downgradient as Hill Avenue support the conclusion that the migration of contaminants to the ditch from former operations areas of the site is increasing and is likely to continue until the coal tar creosote and associated contaminated soils have been removed or alternative engineering controls are implemented at the TTT Site.

C. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

Flow from Williams Ditch downstream is naturally accelerated by heavy rainfall and runoff. Such weather conditions contribute to further contamination of the Ottawa River and Lake Erie by accelerating the flow of subsurface contaminants to the surface of the TTT Site and to Williams Ditch.

In addition, during heavy rain events, the inability of Williams Ditch to accommodate all flows of storm water runoff has resulted in creosote-generated oils from the ditch surface and sediments to be released over the banks of the ditch to the road surface and adjoining commercial/industrial properties. Besides spreading of the contamination, this condition promotes tracking of contaminants by vehicles and pedestrians. Further spreading of contamination occurs when maintenance workers responding to slick road conditions become involved in the cleanup and disposal of contaminated oils without being aware of the exposure implications of their work. NSS reported just such an incident involving City of Toledo road maintenance crews in September 1997.

IV. ENDANGERMENT DETERMINATION

Given the TTT Site conditions, the nature of the suspected hazardous substances on-site, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this TTT Site, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

The OSC proposes that the following actions be taken by PRPs to mitigate threats posed by the presence of coal tar creosote at the TTT Site:

1) Develop and implement a site health and safety plan, including an air monitoring plan;

2) Implement appropriate site security measures;

3) Completely contain and recover all the creosote contaminants that are migrating downstream in Williams Ditch and maintain the containment recovery system until such time that the contaminant sources have been removed or permanently controlled;

4) Identify the immediate source areas of creosote contamination that are contributing to the creosote and related contamination in Williams Ditch;

5) Remove the immediate source areas of hazardous substances or implement engineering controls to completely prevent the contamination in the source area from migrating to Williams Ditch and to the surface of Frenchmens Road;

6) Characterize the extent of coal tar creosote contamination in the sediments and water of Williams Ditch;

7) Remove coal tar creosote contamination from Williams Ditch sediments and/or implement additional engineering controls to prevent continued release of contaminants to Williams Ditch and

8) Conduct investigation activities necessary to support an Engineering Evaluation/Cost Analysis (EE/CA) for consideration of non-time critical alternatives for removal and stabilization of remaining sources of coal tar creosote and related hazardous substance contamination to soil, sediments and surface water at the TTT Site.

All hazardous substances, pollutants or contaminants removed off-site pursuant to this removal action for treatment, storage, and disposal shall be treated, stored, or disposed of at a facility in compliance, as determined by U.S. EPA, with the U.S. EPA Off-site Rule, 40 CFR § 300.440.

The OSC has initiated consideration for provision of post-removal site control consistent with the provisions of Section 300.415(l) of the NCP. It is anticipated that any post-removal site control will be undertaken by potentially responsible parties (PRPs).

The response actions described in this memorandum directly address the actual or threatened release at the site of a hazardous substance, or of a pollutant, or of a contaminant which may pose an imminent and substantial endangerment to public health or welfare or to the environment. These response actions do not impose a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed. It is anticipated that time-critical removal activities will take approximately 160 calendar days to complete.

Applicable or Relevant and Appropriate Requirements. All applicable, relevant, and appropriate requirements (ARARs) will be complied with to the extent practicable. A letter was sent to Ron Nabors of the OEPA on December 1, 1997, requesting that the OEPA identify State ARARs. Any State or Federal ARARs identified in a timely manner for this removal action will be complied with to the extent practicable.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Continued risk to public health and the environment will result if no action or delayed action ensues.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues associated with this site.

VIII. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this TTT Site is contained in the Enforcement Confidential Addendum.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Toledo Tie Treatment Site developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based upon the Administrative Record for the TTT Site. Conditions at the TTT Site meet the NCP Section 300.415(b)(2) criteria for a removal and I recommend your approval of the proposed removal action. You may indicate your decision by signing below.

APPROVE: Wm. E. Muno DATE: 12/24/97
Director, Superfund Division

DISAPPROVE: _____ DATE: _____
Director, Superfund Division

cc: K. Mould, U.S. EPA, 5202-G
D. Henne, U.S. Department of the Interior, **w/o Enf. Addendum**
K. Clouse, OEPA, DERR, **w/o Enf. Addendum**

ATTACHMENT 1

ADMINISTRATIVE RECORD INDEX
TOLEDO TIE TREATMENT TTT Site
TOLEDO, LUCAS COUNTY, OHIO
DECEMBER 1997

DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
09/07/93	Wylie, K. OEPA		Site Inspection Report Toledo Tie Treatment Site	22
12/05/95	OEPA		Health Consultation, Toledo Tie Treatment Site	11
10/03/97	Orr, D. U.S. EPA	Dollhopf, R. U.S. EPA	Memo Re Toledo Tie Treatment Site	1
10/09/97	Mariucci, G. National Super Services	NRC U.S.C.G.	Spill Report Re Toledo Tie Treatment Site	2
10/22/97	Richardson, I. Conestoga-Rovers & Assoc.	Dollhopf, R. U.S. EPA Toledo, Ohio	Progress Update No. 1 National Super Service Plant	5
10/31/97	Lockhart, S. Hull & Assoc.	Dollhopf, R. U.S. EPA	Letter and memo Re Williams Ditch Project, Toledo, Ohio	24
11/05/97	Lescallett, G. Hull & Assoc.	Dollhopf, R. U.S. EPA	Update of Site Activities, Williams Ditch Project, Toledo, Ohio	4
11/17/97	Lescallett, G. Hull & Assoc.	Dollhopf, R. U.S. EPA	Field Monitoring Observations at Williams Ditch	23
11/17/97	Ecology & Environment	U.S. EPA	Letter Report for Toledo Tie Treatment Site	25 +video
11/19/97	Richardson, I. Conestoga-Rovers & Assoc.	Dollhopf, R. U.S. EPA	Progress Update No. 2, National Super Service Plant, Toledo, Ohio	3

DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
11/19/97	Dollhopf, R.	Lockhart, S.	Letter Re Toledo Tie Treatment Plant Site	2
12/01/97	Dollhopf, R. U.S. EPA	Nabors, R. OEPA	Letter Requesting State ARARs	1
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ATTACHMENT 1
U.S. EPA ADMINISTRATIVE RECORD
TOLEDO TIE TREATMENT SITE
TOLEDO, LUCAS COUNTY, OHIO
ORIGINAL
12/22/97

DOC#	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	09/07/93	Ohio EPA		Site Inspection Report for the Toledo Tie Treatment Site	50
2	12/05/95	Ohio Department of Health		Health Consultation Report for the Toledo Tie Treatment Site	10
3	10/03/97	Mariucci, G., National Super Service	Dollhopf, R., U.S. EPA	Memorandum re: Williams Ditch Oil Boom at the Toledo Tie Treatment Site	2
4	10/09/97	Mariucci, G.; National Super Service	USCG/National Response Center	Spill Report re: the Toledo Tie Treatment Site	2
5	10/22/97	Richardson, I., Conestoga-Rovers & Associates	Dollhopf, R., U.S. EPA	Progress Update No. 1 for the National Super Service Plant	5
6	10/31/97	Lockhart, S., Hull & Associates, Inc.	Dollhopf, R., U.S. EPA	Letter Forwarding Attached Summary Memorandum re: the Williams Ditch Project	24
7	11/05/97	Lescallett, G., Hull & Associates, Inc.	Dollhopf, R., U.S. EPA	FAX Transmission re: Update of Site Activities at the Williams Ditch Project	4
8	11/17/97	Ecology and Environment, Inc.	U.S. EPA	Letter Report for the Toledo Tie Treatment Site w/Site Assessment and Removal Activities Videotape (VIDEOTAPE MAY BE VIEWED AT U.S. EPA/REGION 5)	27
9	11/17/97	Lescallett, G., Hull & Associates, Inc.	Dollhopf, R., U.S. EPA	Memorandum re: Field Monitoring Observations at Williams Ditch	23
10	11/19/97	Dollhopf, R., U.S. EPA	Lockhart, S., Hull & Associates, Inc.	Letter re: Various Issues at the Toledo Tie Treatment Site	2
11	11/19/97	Richardson, I., Conestoga-Rovers & Associates	Dollhopf, R. and D. Orr; U.S. EPA	Memorandum re: Progress Update #2 for the National Super Service Plant	3
12	12/01/97	Dollhopf, R., U.S. EPA	Nabors, R., Ohio EPA	Letter re: U.S. EPA's Request for Ohio ARARs for the Toledo Tie Treatment Site	1
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